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| 10/735,826 | 12/16/2003 | Yasuhiko Matsunaga | U2054.0146 | 5530 |

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| EXAMINER | |
|---|---|
| NGUYEN, TU X | |
| ART UNIT | PAPER NUMBER |
| 2618 | |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/735,826 | MATSUNAGA, YASUHIKO | |
| | Examiner | Art Unit | |
| | Tu X. Nguyen | 2618 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *15 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-5,19-26,34-40,45-48,57,60,61 and 63* is/are pending in the application.

4a) Of the above claim(s) *6-18,27-33,41-44,49-56,58,59,62 and 64-76* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,19-25,34-40,45-48,57,60,61 and 63* is/are rejected.

7)☒ Claim(s) *2 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### Response to Amendment

Applicant's arguments filed 11/15/07 have been fully considered but they are not persuasive.

In response to Applicant argument "Laakso shows a method for controlling traffic load in a telecommunications network. However, Laakso neither teaches nor suggests the feature of amended claim 1 taking alteration control of a frequency that the radio base station utilizes on the basis of total received levels of other base stations using the same frequency as the radio base station. Shimono teaches a mobile commmlications system, but does not remedy the above-mentioned deficiency of Laakso as a reference against amended independent claim 1", the Examiner disagrees, Laakso teaching a method for traffic load control in a CDMA network (see par.026), therefore, all other base stations are utilized in the same frequency.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 19-21, 23-25, 34-40, 57 and 60-61, are rejected under 35 U.S.C. 102(b) as being anticipated by Laakso (US Pub. 2003/0003921).

Regarding claims 1, 25, Laakso discloses a radio-resource management method comprising a control step of, based on radio-link quality information, including at least a received level of a radio link (see par.064), to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators, taking alteration control of a frequency that said radio base station utilizes (see par.016 lines 16-17, par.029), on the basis of total received levels of other base station (see par.003, 064) using the same frequency as said radio base station (see par.026, "CDMA" is the same frequency for other base stations).

Regarding claims 3, 22, 38, Laakso discloses said radio-link quality information is notified at a predetermined notification period (see par.064).

Regarding claims 4-5, 23-24, 39-40, Laakso discloses in the event that a link quality of the radio link exceeded a predetermined threshold, said notification period is set to be longer than it is set in the event that it is equal to or less than said threshold (see par.064, 0140).

Regarding claims 19, 34, Laakso discloses a radio-resource management method comprising a control step of, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of a plurality of radio base stations and radio terminals belonging to respective different operators, detecting an interference state between the operators to take fault-notification control according to this detected result, and taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations using the same frequency as said radio base station (see par.029, 036).

Regarding claims 20, 35, Laakso discloses radio-resource management method characterized in that said control step has a step of, in the event that radio interference having a pre-specified value or more from the other radio operator was detected within a network of a certain radio operator (see par.033,034), making fault notification to a network management server of the radio operator that is an interference source (see par.029, 036).

Regarding claims 21, 36, Laakso discloses control step has a step of, in addition to said fault notification, making notification of anyone of an interference quantity, a transmitted-power quantity that the radio base station should attenuate, and a frequency that the radio base station should alter, or a combination thereof as well (see par.054-057).

Regarding claim 37, Laakso discloses a radio base station in a wireless network system including a radio-resource management apparatus for managing a radio resource, and radio base stations belonging to a plurality of respective different radio operators, said radio base station comprising: means for measuring a quality of a radio link and notifying radio-link quality information that is this measured result to said radio-resource management apparatus; and means for, in reply to alteration-control notification of a frequency based on said measured result from said radio-resource management apparatus, taking alteration control of a service frequency on the basis of total received levels of other base station using the same frequency as said radio base station (see par.016 lines 16-17, par.064, 057, 0157).

Regarding claims 57 and 60-61, Laakso discloses a computer-readable program (see abstract, a computer-readable program is inherent for carrying such complex tasks) for causing a computer to execute a control operation of a radio-resource management apparatus in a wireless network system, said program characterized in including a frequency control step

of, based on radio-link quality information, including at least a received level of a radio link, to be notified from at least one of radio base stations and radio terminals belonging to respective different operators, taking alteration control of a frequency that said radio base station utilizes on the basis of total received levels of other base stations using the same frequency as said radio base station (see par.064, 057, 0157).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 45-48 and 63, are rejected under 35 U.S.C. 103(a) as being unpatentable over Laakso in view of Shimono et al. (US Pub. 20010044306).

Regarding claim 45, Laakso discloses a radio terminal in a wireless network system including a radio-resource management apparatus for managing a radio resource, and radio base stations belonging to a plurality of respective different radio operators; in reply to alteration-control notification of a frequency based on said measured result from said radio-resource management apparatus, taking alteration control of a service frequency (see par.016 lines 16-17, par.064, 057, 0157) on the basis of total received levels of other base stations using the same frequency as said radio base station (see par.029).

Laakso fails to disclose radio terminal comprising: means for measuring a quality of a radio link, including at least a receive level of a radio link and notifying radio-link quality information that is this measured result to said radio-resource management apparatus.

Shimono et al. disclose radio terminal comprising: means for measuring a quality of a radio link including at least a receive level of a radio link and notifying radio-link quality information that is this measured result to said radio-resource management apparatus (see par.095). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Laakso with the above teaching of Shimono et al. in order to provide the mobile terminal has a capability to measure signal quality and to report to the base station.

Regarding claim 46, the modified Laakso discloses said means for notifying makes notification at a predetermined notification period (see Laakso, par.064).

Regarding claims 47-48, the modified Laakso disclose in the event that the radio-link quality exceeded a predetermined threshold, said notification period is set to be longer than it is set in the event that it is equal to or less than said threshold (see Laakso, par.064, 0140).

Regarding claim 63, Laakso discloses a computer-readable program for causing a computer (see abstract, a computer-readable program is inherent for carrying such complex tasks) to execute a control operation of a radio terminal in a wireless network system including a radio-resource management apparatus for managing a radio resource, and radio base stations belonging to a plurality of respective different radio operators, said program characterized in including the steps of: in reply to alteration-control notification of a frequency based on said measured result from said radio-resource management apparatus, taking

alteration control of a service frequency on the basis of total levels of other base stations using the same frequency as said radio base station (see par.064, 057, 0157).

Laakso fails to disclose radio terminal comprising: means for measuring a quality of a radio link and notifying radio-link quality information. Including at least a received levels of a radio link, that is this measured result to said radio-resource management apparatus.

Shimono et al. disclose radio terminal comprising: means for measuring a quality of a radio link and notifying radio-link quality information that is this measured result to said radio-resource management apparatus (see par.095). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Laakso with the above teaching of Shimono et al. in order to provide the mobile terminal has a capability to measure signal quality and to report to the base station.

***Allowable Subject Matter***

Claims 2 and 26, objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Claims 2 and 26 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed Tu Nguyen whose telephone number is 571-272-7883.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 03, 2007